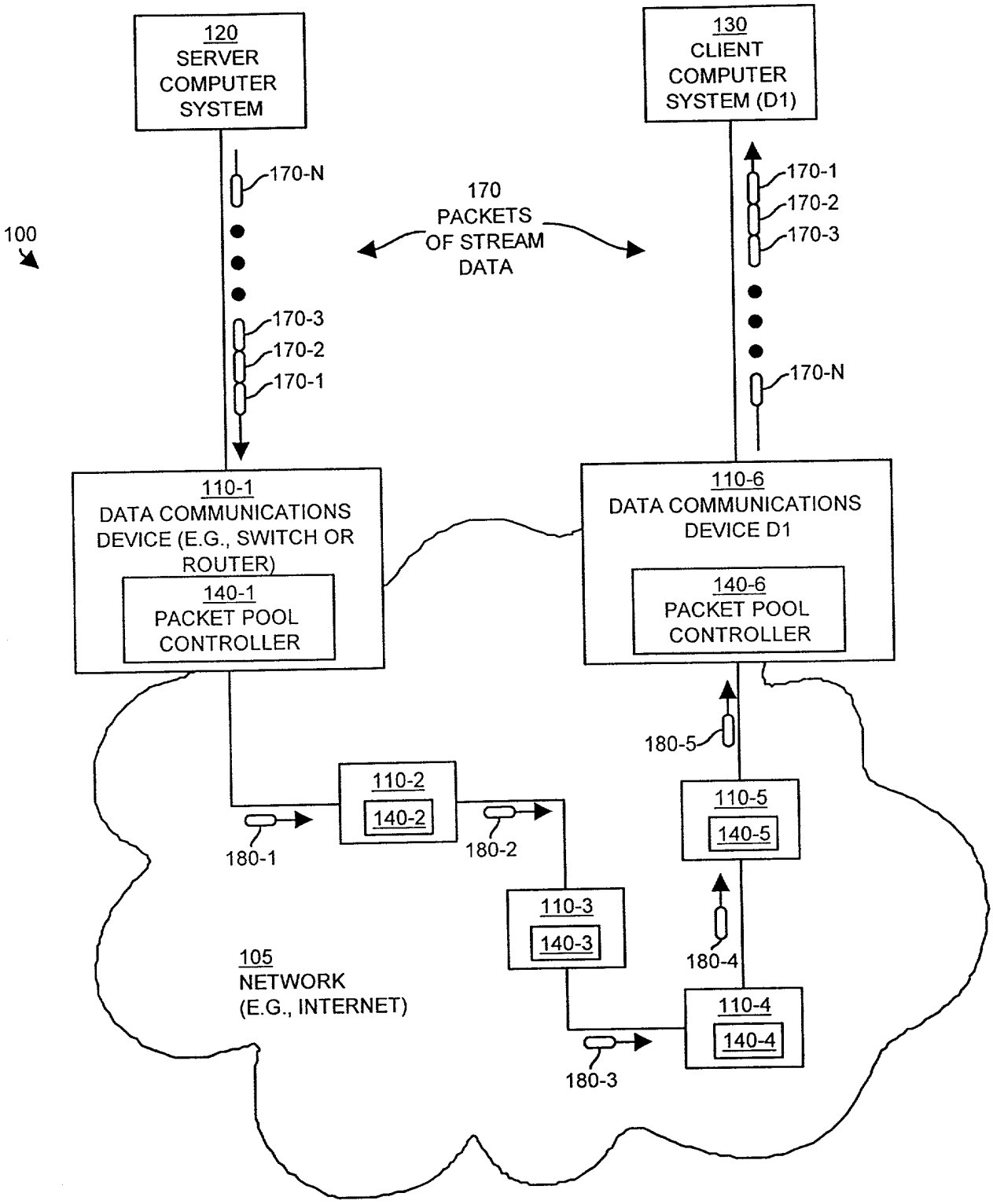
120
SERVER
COMPUTER
SYSTEM
130
CLIENT
COMPUTER
SYSTEM (D1)
100
170
PACKETS
OF STREAM
DATA
170-N
170-3
170-2
170-1
170-1
170-2
170-3
170-N
110-1
DATA COMMUNICATIONS
DEVICE (E.G., SWITCH OR
ROUTER)
140-1
PACKET POOL
CONTROLLER
110-6
DATA COMMUNICATIONS
DEVICE D1
140-6
PACKET POOL
CONTROLLER
180-5
110-2
140-2
180-1
180-2
110-5
140-5
110-3
140-3
180-4
105
NETWORK
(E.G., INTERNET)
110-4
140-4
180-3

FIG. 1

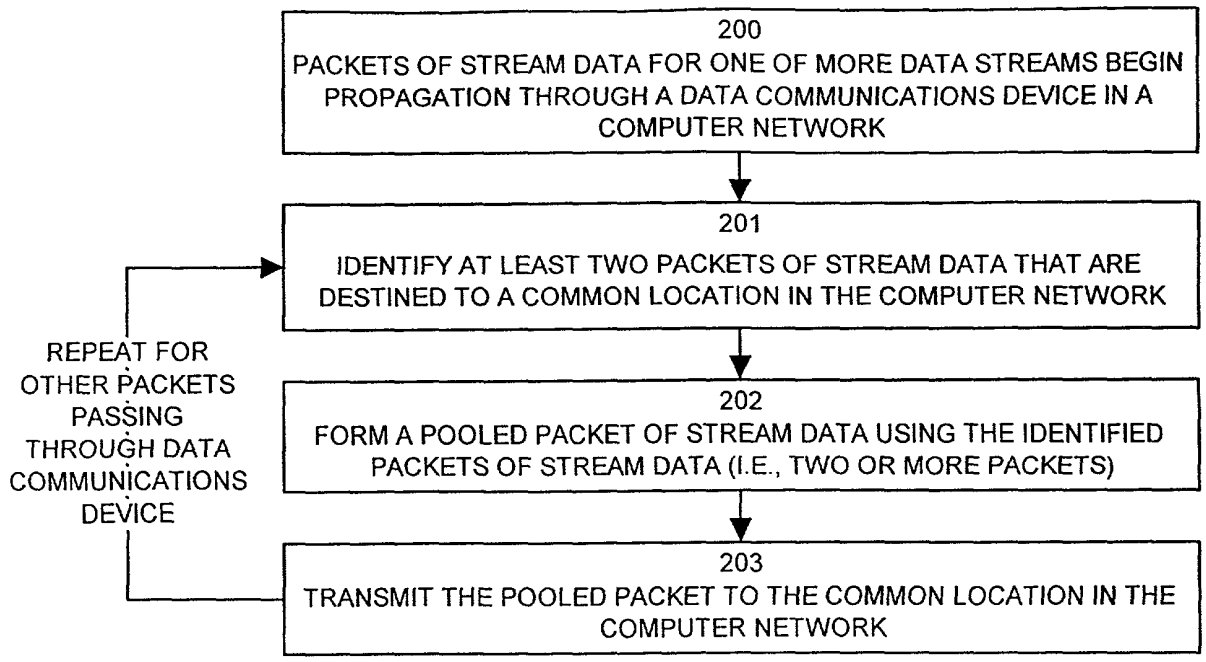
200
PACKETS OF STREAM DATA FOR ONE OF MORE DATA STREAMS BEGIN PROPAGATION THROUGH A DATA COMMUNICATIONS DEVICE IN A COMPUTER NETWORK
201
IDENTIFY AT LEAST TWO PACKETS OF STREAM DATA THAT ARE DESTINED TO A COMMON LOCATION IN THE COMPUTER NETWORK
202
FORM A POOLED PACKET OF STREAM DATA USING THE IDENTIFIED PACKETS OF STREAM DATA (I.E., TWO OR MORE PACKETS)
203
TRANSMIT THE POOLED PACKET TO THE COMMON LOCATION IN THE COMPUTER NETWORK
REPEAT FOR OTHER PACKETS PASSING THROUGH DATA COMMUNICATIONS DEVICE

FIG. 2

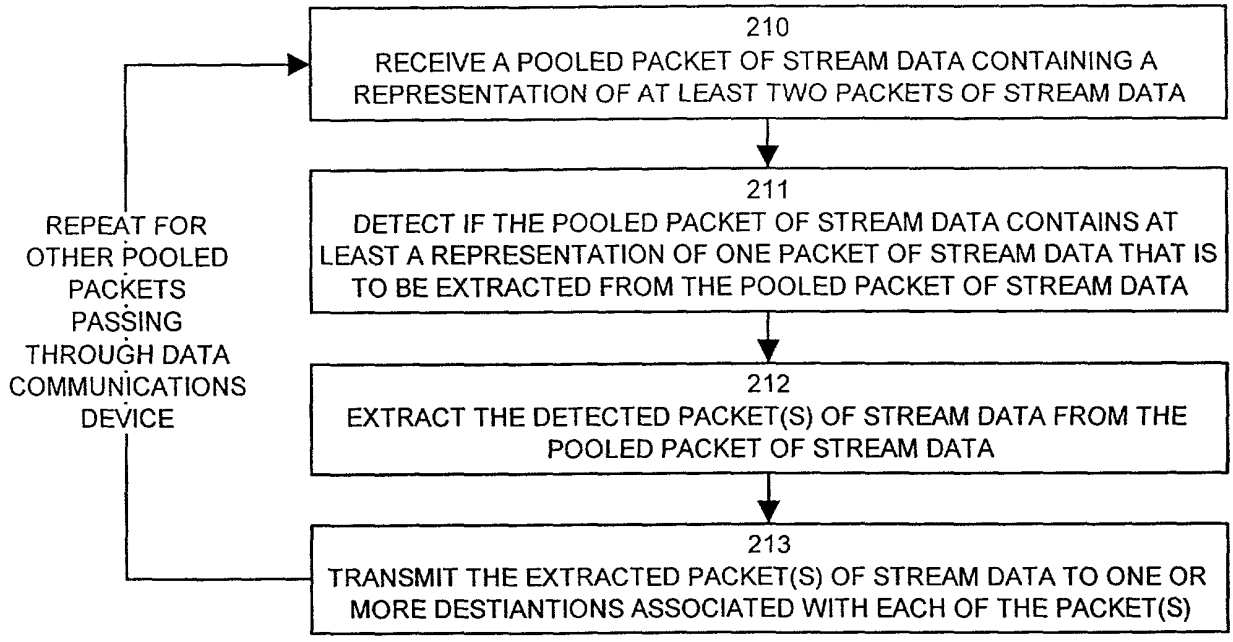
210
RECEIVE A POOLED PACKET OF STREAM DATA CONTAINING A REPRESENTATION OF AT LEAST TWO PACKETS OF STREAM DATA
211
DETECT IF THE POOLED PACKET OF STREAM DATA CONTAINS AT LEAST A REPRESENTATION OF ONE PACKET OF STREAM DATA THAT IS TO BE EXTRACTED FROM THE POOLED PACKET OF STREAM DATA
212
EXTRACT THE DETECTED PACKET(S) OF STREAM DATA FROM THE POOLED PACKET OF STREAM DATA
213
TRANSMIT THE EXTRACTED PACKET(S) OF STREAM DATA TO ONE OR MORE DESTIANTIONS ASSOCIATED WITH EACH OF THE PACKET(S)
REPEAT FOR OTHER POOLED PACKETS PASSING THROUGH DATA COMMUNICATIONS DEVICE

FIG. 3

Attorney Docket No.: 10559-1410001

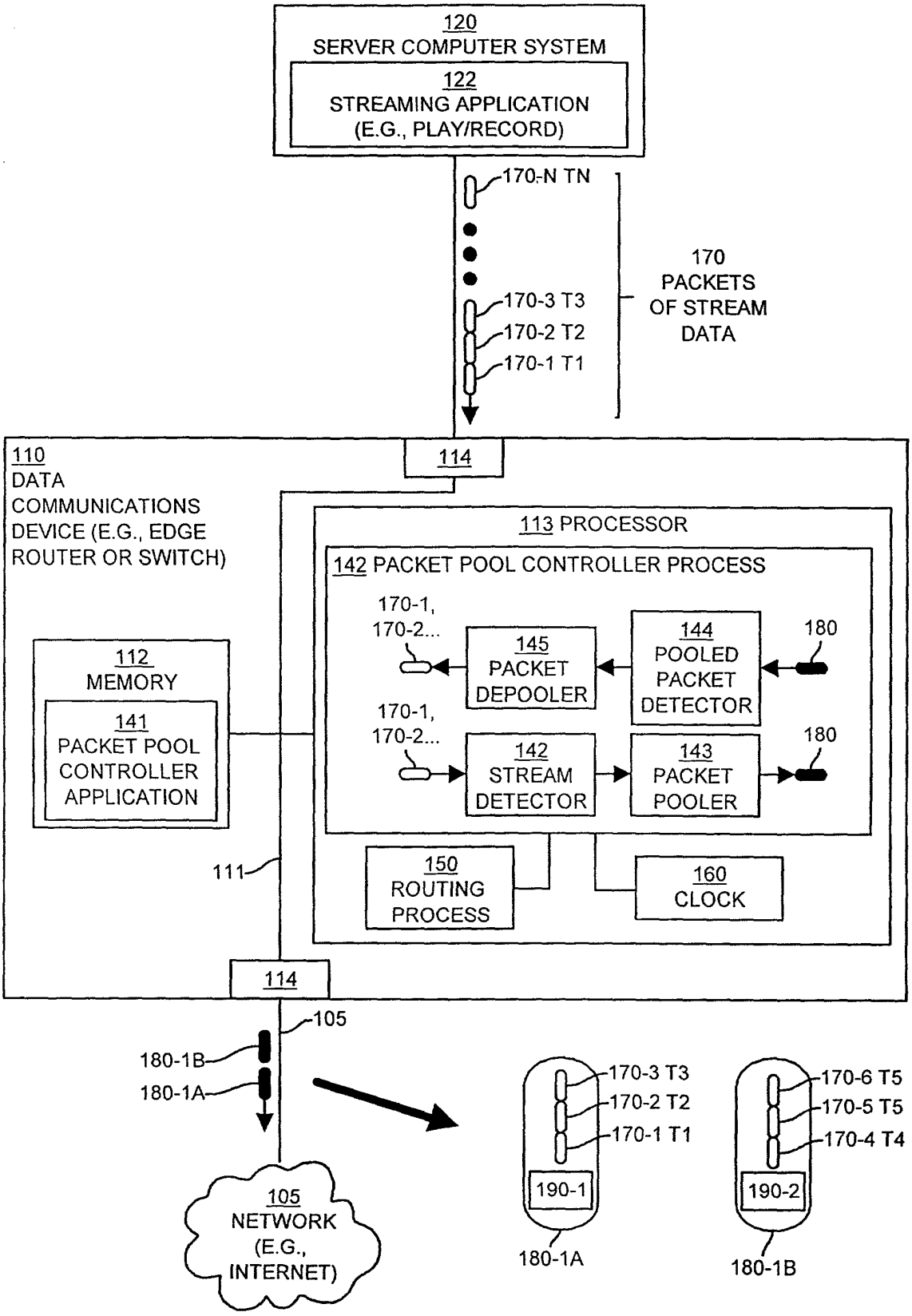

FIG. 4

190-A EXAMPLE POOLED PACKET INDEX

191 PACKET	192 START	193 LENGTH
170-1	0	300 BYTES
170-2	300	300 BYTES
170-3	600	300 BYTES

FIG. 5A

190-B EXAMPLE POOLED PACKET INDEX

191 PACKET	192 START	193 LENGTH	194 TIME TO LIVE
170-4	0	256	5 HOPS
170-5	256	300	5HOPS
170-6	556	102	3HOPS
170-7	658	512	4HOPS

FIG. 5B

Patent Application Publication

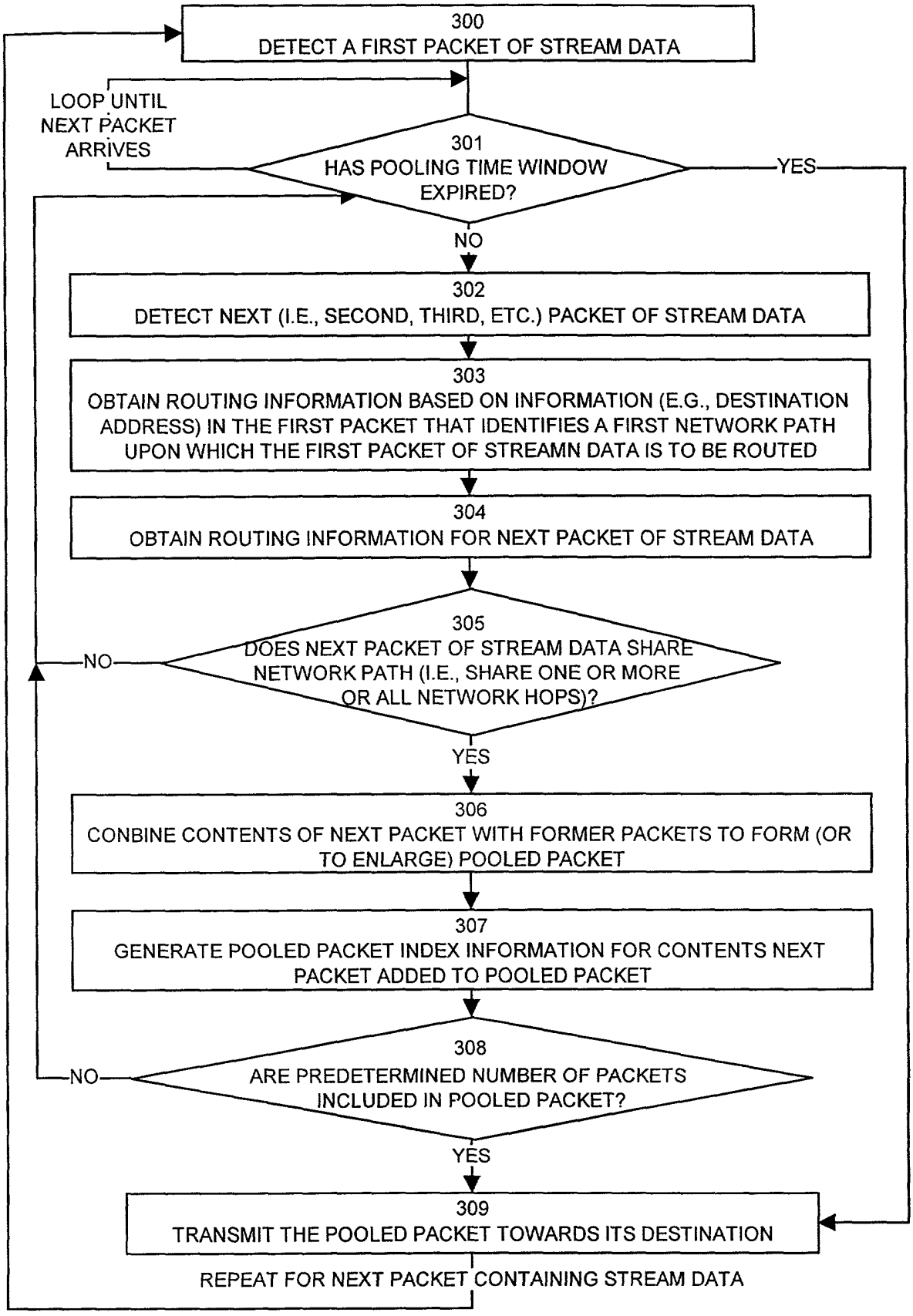

FIG. 6

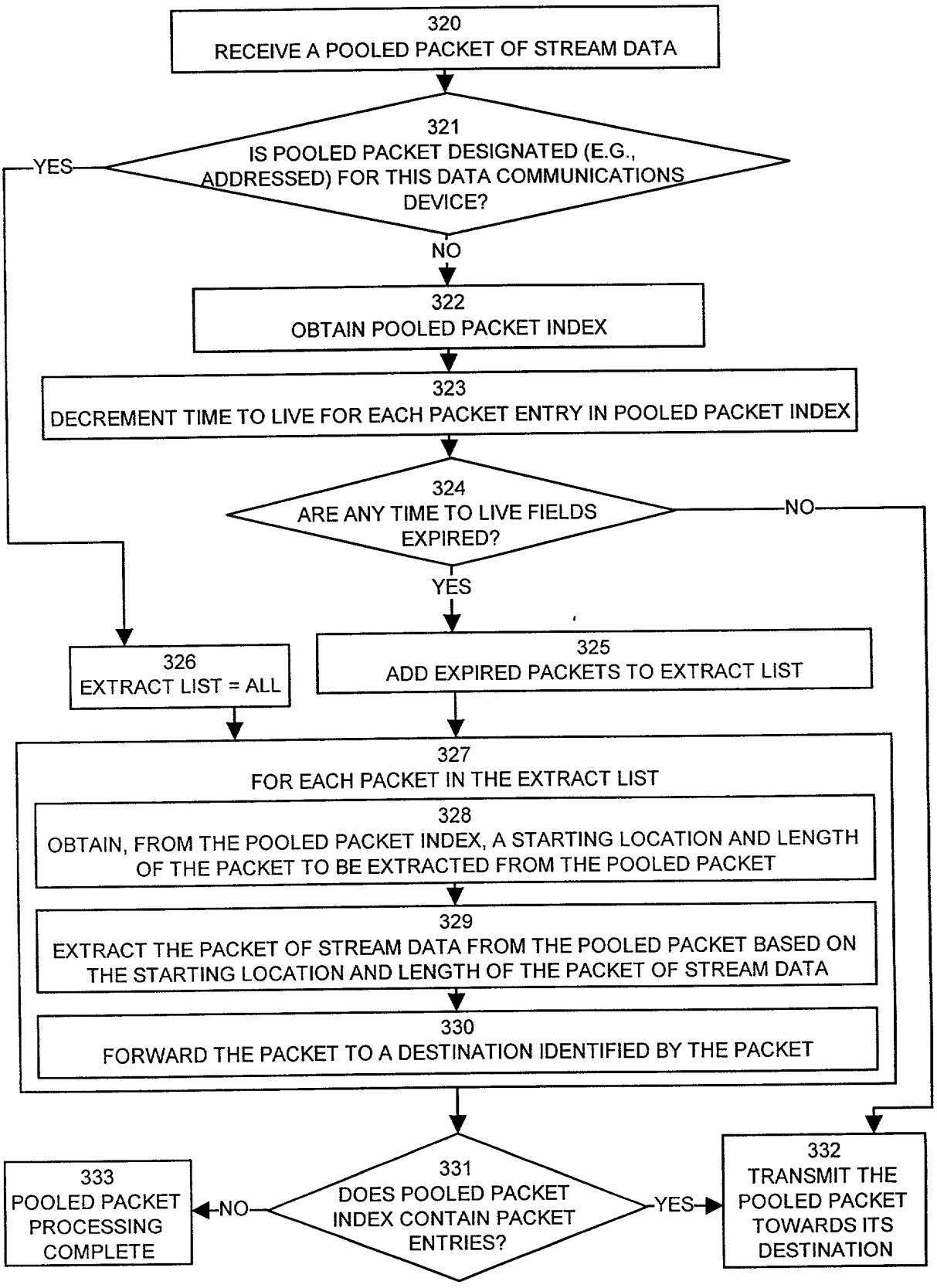
320
RECEIVE A POOLED PACKET OF STREAM DATA
321
IS POOLED PACKET DESIGNATED (E.G., ADDRESSED) FOR THIS DATA COMMUNICATIONS DEVICE?
YES
NO
322
OBTAIN POOLED PACKET INDEX
323
DECREMENT TIME TO LIVE FOR EACH PACKET ENTRY IN POOLED PACKET INDEX
324
ARE ANY TIME TO LIVE FIELDS EXPIRED?
NO
YES
326
EXTRACT LIST = ALL
325
ADD EXPIRED PACKETS TO EXTRACT LIST
327
FOR EACH PACKET IN THE EXTRACT LIST
328
OBTAIN, FROM THE POOLED PACKET INDEX, A STARTING LOCATION AND LENGTH OF THE PACKET TO BE EXTRACTED FROM THE POOLED PACKET
329
EXTRACT THE PACKET OF STREAM DATA FROM THE POOLED PACKET BASED ON THE STARTING LOCATION AND LENGTH OF THE PACKET OF STREAM DATA
330
FORWARD THE PACKET TO A DESTINATION IDENTIFIED BY THE PACKET
331
DOES POOLED PACKET INDEX CONTAIN PACKET ENTRIES?
NO
YES
333
POOLED PACKET PROCESSING COMPLETE
332
TRANSMIT THE POOLED PACKET TOWARDS ITS DESTINATION

FIG. 7